pm J-AIT
PRODUCT MANAGER
JOINT-AUTOMATIC IDENTIFICATION TECHNOLOGY

Product Manager Joint-Automatic Identification Technology

John Waddick

PE EIS
PEO ENTERPRISE INFORMATION SYSTEMS

*pm*J-AIT

One day of pipeline = $74.7M Annual value pipeline = $27.3B

SKUs - 4.4M

Orders - 25M annually

**1.75M air shipments
208K S/T air cargo**

During Operation Desert Storm, the United States moved more than 40,000 containers to the theater of operations. With a paper-based supply system and that many containers in theater, the biggest bottleneck in the logistics pipeline occurred where the supplies came off the ships. **"More than half of the cargo containers in theater were filled with 'mystery' items,"** said Corrina Panduri, a project leader with the Product Manager, Defense-Wide Transmission Systems. **"Nobody knew where these items — including more than $2.7 billion in spares —were supposed to go."**

Deployable Communications System Reduces Port Cargo Confusion **by Robert Fowler and Stephen Larsen**
http://www.almc.army.mil/alog/July_Aug_2003.pdf

Background

Desert Shield/Desert Storm:

- Shipped 42,000 containers, opened 22,000+ to find what was in them.
- Manual input source data
- Limited or No Asset and In-Transit Visibility
- Re-ordering of supplies not received
- Little or No Connectivity
- Stovepipe STAMISs
- Batch Processing
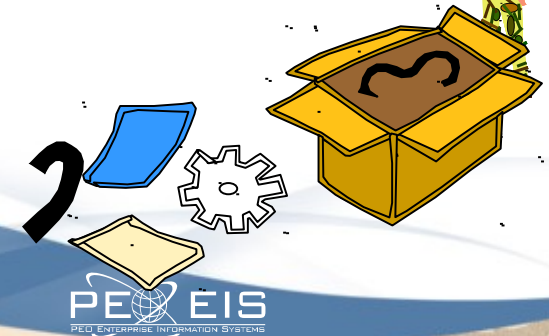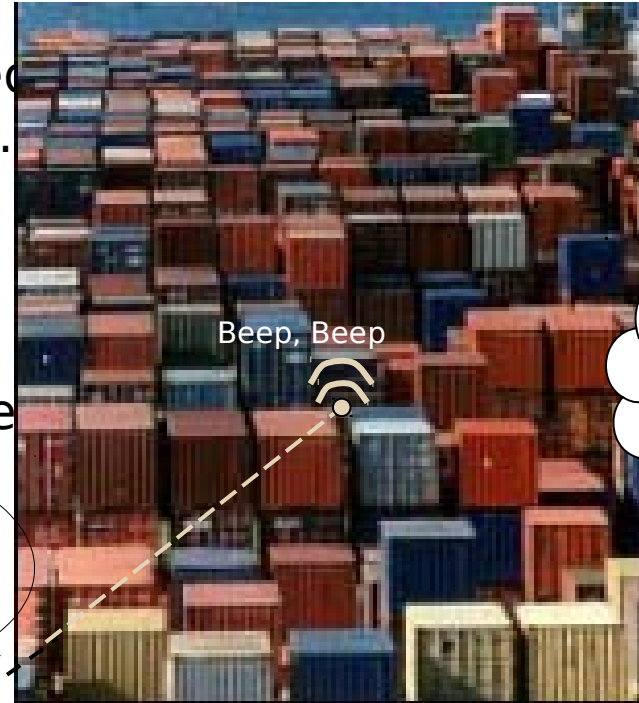- "The Iron Mountain"
- Critical GAO Reports

Then 1990-91

Beep, Beep

Where are those MREs!!

The MREs are in Container 11275

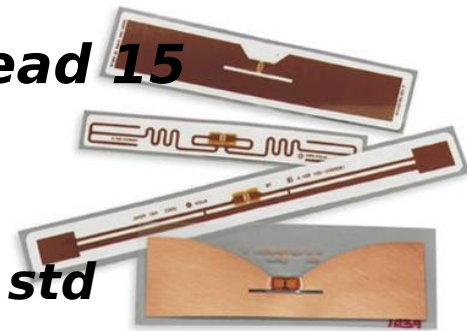Now 2003

Policy Scope

Active RFID – freight containers, air pallets

- *SAVI 433 Mhz readers*
- *SAVI 410 tags*
- *DoD tag data formats*
- *Minimum read range 300 ft*

Passive RFID – case, pallet, UID item packaging

- *EPC std UHF readers (Maximum read 15 ft)*
- *EPC Class 0 & 1 std tags*
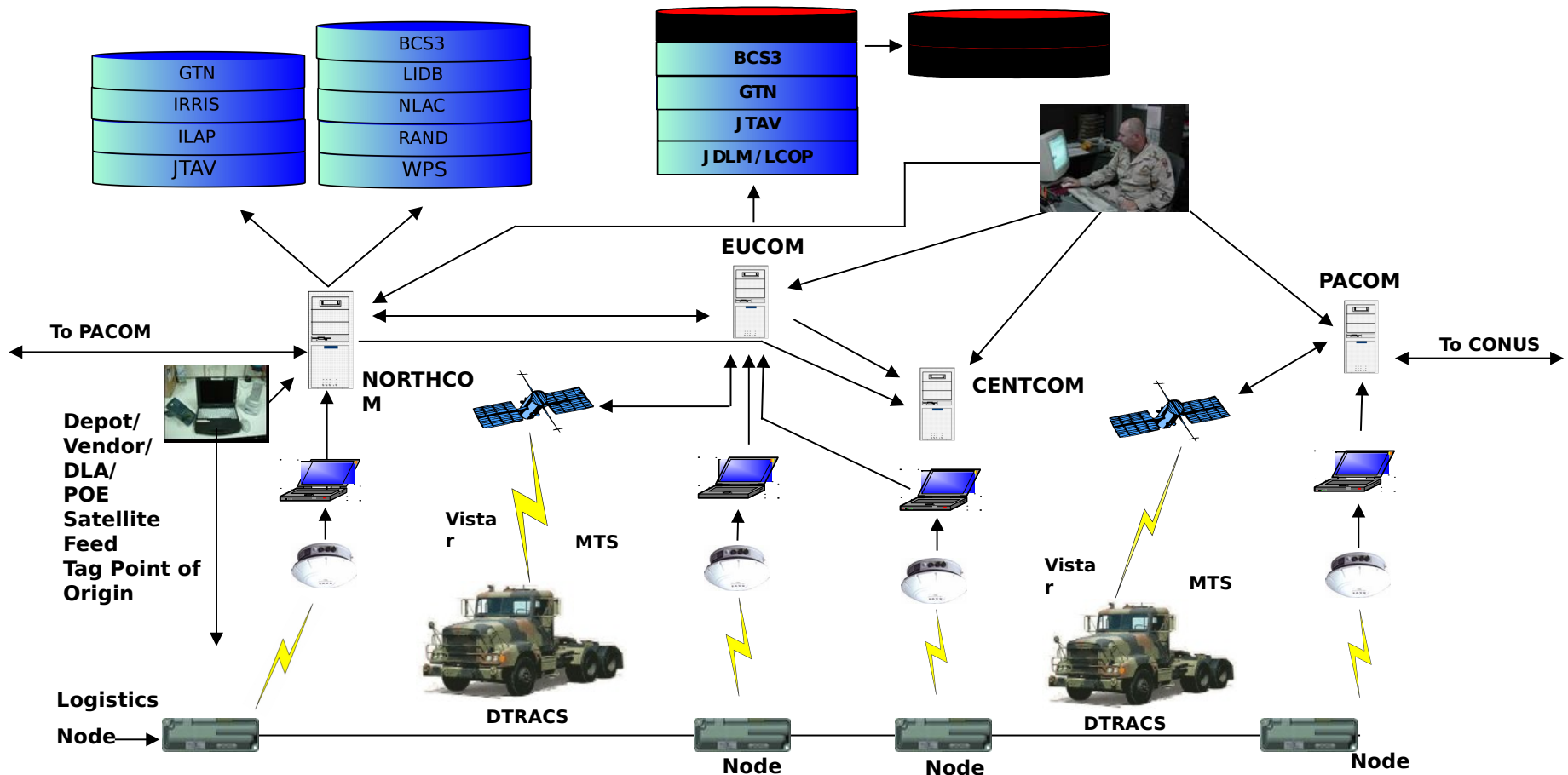 - ➢*Migration to EPC UHF Generation 2 std*
- *EPC and DoD tag data formats*

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RFID Global ITV Infrastructure

Currently Over 1600 Read and Write Sites

RF-ITV Operational View 1 (OV-1)
High Level Operational Concept Graphic

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GTN
IRRIS
ILAP
JTAV

BCS3
LIDB
NLAC
RAND
WPS

BCS3
GTN
JTAV
JDLM/LCOP

EUCOM

PACOM

To PACOM

NORTHCOM

To CONUS

Depot/
Vendor/
DLA/
POE
Satellite
Feed
Tag Point of
Origin

CENTCOM

Vistar

MTS

Vistar

MTS

Logistics
Node

DTRACS

DTRACS

Node

Node

Node

Node

Node

LEGEND

Customer System

Local ITV Workstation

Military User

Electronic Data

RF Tag

Satellite

Read/Write Station

Logistics Node
Interrogator
ITV Server

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pmJ-AIT In-Transit Visibility Via Web ITV Server Query

Data from interrogator

Data from Tag

*pm*J-AIT   A "Disruptive" Requirement?

USCINCCENT MACDILL AFB FL R 311340Z JUL 02

- "EXISTING GLOBAL IN-TRANSIT AND TOTAL ASSET VISIBILITY CAPABILITIES (GTN AND JTA) HAVE BEEN <u>MARGINALLY SUCCESSFUL</u> IN PROVIDING NEEDED CONTENT LEVEL VISIBILITY FOR SHIPMENTS."

- "RADIO FREQUENCY IDENTIFICATION (RFID) TECHNOLOGY WHEN USED HAS <u>PROVEN TO BE THE TOOL MOST SUCCESSFUL FOR CIRCUMVENTING CONTENT LEVEL DETAIL SHORTFALLS</u> FOR OEF CONTAINERS AND PALLETS.

  THIS COMMAND BELIEVES RFID <u>OFFERS THE BEST POTENTIAL</u> FOR IMMEDIATE IN-TRANSIT VISIBILITY AND SHOULD BECOME THE JOINT OPERATIONAL STANDARD FOR ALL SERVICES."

- "GIVEN THIS FACT, <u>USCENTCOM WILL REQUIRE ALL AIR PALLETS, CONTAINERS, AND COMMERCIAL SUSTAINMENT</u> MOVING TO/FROM THE THEATER AND INTRA-THEATER MOVEMENTS TO BE TAGGED WITH RFID AT ORIGIN FOR ASSET AND INTRANSIT VISIBILITY TRACKING IN THE CJOA."

- "COMMANDS, SERVICES, AGENCIES, AND COMMERCIAL VENDORS <u>MUST TAKE IMMEDIATE STEPS</u> TO ACQUIRE, INSTALL, AND IMPLEMENT RFID TAGGING CAPABILITY."

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- Active RFID – Operational; Implementation Continuing

- Passive RFID
  - **DoD – Implementation underway now**
  - **Suppliers – Effective Jan 2005 according to the *Passive Supplier Implementation Plan* published in July 30, 2004 policy**

![pm J-AIT logo]

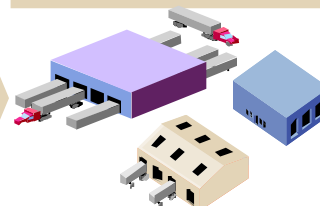# RFID in Global Supply Chain
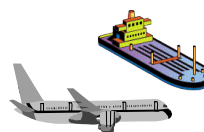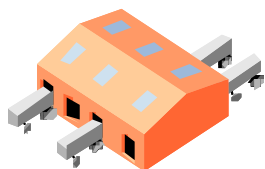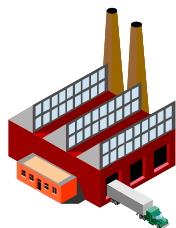
Today

ACTIVE

Future

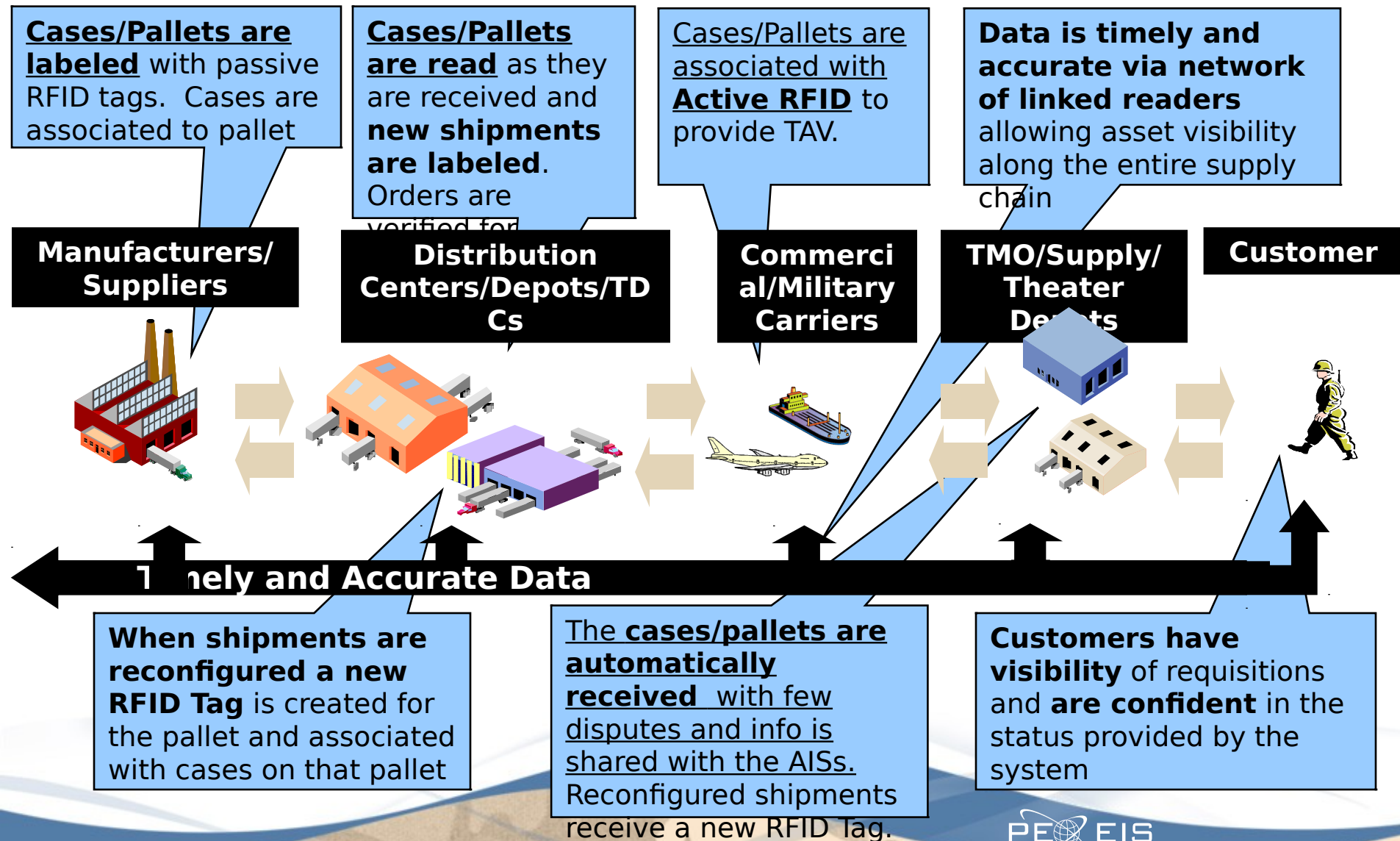| Manufacturers/ Suppliers | Distribution Centers/Depots | POEs/PODs | Transportation/Supply/ Theater Depots/TDCs | Customers |

| PASSIVE | ACTIVE | PASSIVE |

Enables Shipping Node

TAV / ITV DoD Supply Chain Transportation

Enables Receiving Node

pmJ-AIT An Enabler to the Integrated DoD Supply Chain

Cases/Pallets are labeled with passive RFID tags. Cases are associated to pallet

Cases/Pallets are read as they are received and **new shipments are labeled**. Orders are verified for

Cases/Pallets are associated with **Active RFID** to provide TAV.

Data is timely and accurate via network of linked readers allowing asset visibility along the entire supply chain

Manufacturers/ Suppliers

Distribution Centers/Depots/TDCs

Commercial/Military Carriers

TMO/Supply/ Theater Depots

Customer

← Timely and Accurate Data

When shipments are reconfigured a new RFID Tag is created for the pallet and associated with cases on that pallet

The **cases/pallets are automatically received** with few disputes and info is shared with the AISs. Reconfigured shipments receive a new RFID Tag.

Customers have visibility of requisitions and **are confident** in the status provided by the system

PEO EIS
PEO Enterprise Information Systems

Implementation Plan: Commodities

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Commencing January 1, 2005

- **Class I Subclass – Packaged Operational Rations & Packaged Food**
- **Class II – Clothing, Individual Equipment, Tools, & Administrative Supplies**
- **Class VI – Personal Demand Items**
- **Class IX – Repair Parts & Components**

Commencing January 1, 2006

- **Class I – Subsistence & Gratuitous Health & Comfort Items**
- **Class III – Packaged Petroleum, Lubricants, Oils, Preservatives, Chemicals & Additives**
- **Class IV – Construction & Barrier Equipment**
- **Class V – Ammunition of all types**
- **Class VII – Major End Items**
- **Class VIII – Medical Materials (Includes Pharmaceuticals)**

The Future?

- Homeland Security and Customs

- Real-time tracking systems in depots/arsenals and manufacturing facilities.

- Continue expansion in the Department of Defense.

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**Product Manager AIT
ATTN: SFAE-PS-EI-AIT
8580 Cinder Bed Road, Suite 1400
Lorton, VA 22079-1442**

**E-Mail: John.Waddick@eis.army.mil
Comm: (703) 339-4400 x-110
FAX: 703-339-4401**
Web Site: http://www.eis.army.mil/AIT